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Designers' Perceptions of Interdisciplinary Design Education.

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Designers' Perceptions of Interdisciplinary Design Education

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ABSTRACT

Designers' Perceptions of Interdisciplinary Design Education

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The perceived value of interdisciplinary design among designers and the application of the design process was investigated. The research was designed to determine if interdisciplinary design was perceived to be beneficial to practitioners and educators. An 11-item survey was produced by the researcher and consisted of general demographic information, undergraduate education and training, and the benefits of interdisciplinary design. The sample was composed of representatives of the top 100 interior design firms of 2003 and members of the Interior Design Educators Council (IDEC). Respondents indicated training in Architecture, Graphic Design, Interior Design, and Industrial/Product Design, with Architecture and Interior Design comprising the majority of responses. The greater part of those surveyed indicated training in only one discipline. Results showed that interdisciplinary design is perceived to be beneficial; specifically, interdisciplinary design education makes designers professionally more marketable.

DEDICATION

To Nikki, for cheering for me and telling me I could when all I thought was that I couldn't.

Thanks for sticking by me.

To Sidney, your companionship was priceless.

ACKNOWLEDGEMENTS

With special thanks to: David Dixon, you welcomed me into your office and said “interdisciplinary design, I don’t know what that means, but it makes sense”. Douglas Dulaney, cheesecake was a steal for your help and clarity. Karen King, you could have sent me to a number of people but you gave me your time and assistance, taking a huge load off of me. Beth Lowe, who always had a word of encouragement for me and knew where to send me when I was lost. Dr. Amy Malkus, you really helped me understand where I was going. Dr. Nancy Nehring, you never told me to stop asking questions and encouraged me at every step. Dr. John Vaglia, for your willingness to say yes.

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CHAPTER 1

INTRODUCTION

As the pace in a global economy increases, clients are moving away from multiple-source providers and are seeking-out single-source, turnkey providers. This is especially true in the design-arts related fields: architecture, graphic design, industrial/product design, and interior design. The benefits and appreciation of a well-designed environment have been documented and supported not merely by trade sources but also by business giants such as Fortune and Inc. Magazines (Coleman, 2002). For many years, American academia's design pedagogy has treated the various design disciplines as unique and segmented, ignoring the obvious relationships inherent in the design processes and the overall philosophy and basics of design. Currently there is a shift, at least by design students, away from the traditional segmented approach to instruction and a renewed interest in a unified, cohesive methodology to interdisciplinary design education. It appears that a discrepancy exists between on-the-job requirements of designers and training received in undergraduate design programs. Do designers use the design process and is an interdisciplinary design education perceived to be beneficial to interior design practitioners? This research seeks to answer this question.

The researcher became interested in interdisciplinary design due to personal interests. Additionally, while serving as an adjunct faculty member in a university design program, more and more students expressed interest in exploring design career options and the opportunities that were available in the marketplace. Very little research was found in the area of interdisciplinary design, and this current research was seen as an opportunity to expand the design field.

For the purpose of this research, an interdisciplinary design education was defined as an undergraduate design program in which two or more of the following disciplines: architecture, graphic design, industrial/product design, and interior design are taught jointly in some curriculum of their respective program. Additionally, a traditional and segmented hierarchical approach was defined as an undergraduate design program in which each specific discipline was taught independently. Institutions of higher education are recognizing this trend and are slowly beginning to respond to the need. In an informal review conducted in February in 2003 of open interior design faculty positions and posted position requirements for each respective institution on the Interior Design Educators Council (IDEC) web site, the author noted that over 50% of leading design programs are either actively advertising for interdisciplinary faculty or expect faculty to teach in interdisciplinary programs and courses. An additional informal search of the top 100 interior design firms in 2003 by the author indicated that the overwhelming majority of these firms offer and practice interdisciplinary design. Visiting the individual firms' web sites, the author saw that many of the represented firms actively advertise interdisciplinary design services.

CHAPTER 2

LITERATURE REVIEW

Methods and pedagogy appropriate to each design discipline: architecture, graphic design, industrial/product design, and interior design, have long been contested in undergraduate education. Quietly, but frequently, universities and colleges debate where and how design should be taught. Traditional fine arts courses such as drawing, painting, sculpture, and art history are commonly located in art departments. However, design disciplines, which are defined as architecture, graphic design, industrial/product design, and interior design, can be found all over campuses in departments seemingly unrelated to the discipline and somewhat disjointed in philosophy.

Architecture is included in the grouping of design disciplines due to its strong relationships with the other three noted disciplines. There are fewer debates about the appropriate placement of architecture programs and their curriculum, in part because of licensing and certification issues. However, a small sample review of college bulletins evidenced the diversity and titling of architecture programs also. The majority of architecture schools employed the term architecture in some form of their titling. However, many programs included related disciplines such as art and design, fine arts, music, engineering, and a host of other cousins.

The primary question, though, is not what is the correct or appropriate department or building in which to teach the design disciplines. The larger issue is the interdisciplinary, relational nature of the design disciplines and the value of an interdisciplinary design education. Students are seeking a broader exposure to allied design disciplines, architecture, furniture design, graphic design, industrial design, as

well as the specialization of their own discipline (Coleman, 2002). A trend to move from segmented professions to design firms that provide cross-disciplined design services exists in the design industry (Coleman, 2002). Furthermore, Coleman continues, many students seek to continue their education in allied fields and expand their marketability through a number of design abilities. Professor of Design at the British Open University, John Chris Jones, states that interior design education specifically will see a blurring among the traditional allied disciplines of architecture, industrial design, and furniture design, what this author terms interdisciplinary design (as cited in Coleman, 2002).

Debates seem to rage on most fronts. Interior Design Programs are taught in architecture schools, design departments, art departments, applied human sciences, human ecology, near environments, as well as today's choice terminology for what our parents identified as home economics. So the root question becomes are the programs equal at the curriculum and instructional levels? The Foundation for Interior Design Education and Research (FIDER), the accreditation body for interior design programs, is addressing such questions as it seeks to produce accreditation standards for professional-level education (Hildebrandt, 1999).

Interior design programs are not the only victims of design confusion. Graphic design programs, despite their considerable increase in enrollment, still function in poorly equipped and overcrowded studios, producing cash-flow for sparsely occupied but very well equipped fine arts programs (Behrens, 1995). Successful industrial design programs, often siblings of architecture programs, are finding success in engineering programs, promoting the undeniable relationship between the arts, technology, and science-based areas (Kaufman, 2001). A few years ago graphic designer Joe

Godlewski commented “design should never, ever be taught under the umbrella of an art program...[but as] part of a humanities program, a social sciences program, or even more radically, part of a business program” (as cited in Behrens, 1995, p. 78). This quote still makes the design education circles some eight years after being stated.

In reviewing topical literature for this research, the theme of professional designer becomes apparently clear. The only adjective attached to designer is professional. Foundationally, designers are taught the same concepts, applications, and processes to achieve the needed outcomes. The departments may read with varied names. Classes may be on extreme sides of campuses, but the learning is synonymous. Davis (1998), in her article, “*Making a case for design-based learning,”* truly sums up the thought, “although the work of an architect differs in scale, purpose, and technology from the practice of graphic design, a common process unites the problem solving in these and other design disciplines” (p. 7). Commenting further on the design process, architect and author Miller (1995) writes that asking a given number of practitioners to define the design process would render an equal amount of unique responses but that the majority of the responses would follow the same underlying structure. Why, then, are the design disciplines segregated? Industrial designer Victor Papanek shares this view. Establishing programs to train design generalists at both Purdue University and the University of Kansas, Papanek sought graduate applicants whose undergraduate degrees were not in design (Behrens, 1995).

It is unfortunate, Papanek wrote in 1972, that almost all schools or departments of design in the United States require an undergraduate degree in the same field as that in

which the student hopes to do graduate work...because the true design needs of the world must be carried out by cross-disciplinary teams (263).

While not in contemporary vernacular, interdisciplinary design maintains some fairly high-profile supporters and practitioners and is gaining ground, namely Frank Lloyd Wright, Le Corbusier, the Bauhaus, Walter Gropius, Charles and Henry Greene, Philippe Starck, Todd Oldham, Karim Rashid, and numerous others. Frank Lloyd Wright, known primarily for his residential designs in the Mid-West, practiced total interdisciplinary design. Wright was known to tell his clients to discard their personal belongings because he designed everything for the client: architecture, furniture, finishes, lighting, integral desk furniture, and even suspended toilet bowls (Cronon, 1994). Le Corbusier wrote volumes of books on architecture, interior decoration, and painting. Famed as both an architect and city planner, many of today's students would recognize Le Corbusier not just by the Ronchamp Chapel in France, but equally by the Le Corbusier Chaise Longue and the LC1 Chair, iconic furniture classics of the late 1920s still extremely popular today. State Bauhaus Weimar, commonly referred to as The Bauhaus, taught crafts rather than art. At the core of their philosophy was the notion that "the ideal of a labor community for all the arts corresponds to the concept of a unified work of art, the reunification of artistic disciplines - sculpture, painting, applied arts and crafts - to a new architecture" (Bauhaus chronology, 2003, p.1). Today, faculty and students of the Bauhaus still read as a who's who among designers of most all disciplines.

Walter Gropius, director of the Bauhaus from 1919 to 1928, wrote in his 1919 Manifesto for the Bauhaus:

> The ultimate aim of all creative activity is a building! The decoration of buildings was once the noblest function of fine arts, and fine arts were indispensable to great architecture. Today they exist in complacent isolation, and can only be rescued by the conscious cooperation and collaboration of all craftsmen. Architects, painters, and sculptors must once again come to know and comprehend the composite character of a building, both as an entity and in terms of its various parts. Then their work will be filled with that true architectonic spirit which, as "salon art", it has lost (Bauhaus chronology, 2003, p. 11).

Charles and Henry Greene, known in most records as the Greene and Greene Brothers, could also be characterized as interdisciplinary designers. Their work included exteriors, furnishings, joinery, lighting, art glass, carpets, and even gardens if their clients were willing (Greenstein, 1999).

Today's design culture is seeing somewhat of a renewed interest in interdisciplinary design. Karim Rashid, Philippe Starck, and Todd Oldham have each branched out of their specialties to design items such as boutique hotels, furniture, restaurants, linens, watches, chess sets, and a myriad of other applications.

An integral part of the understanding of interdisciplinary design is the use of the design process by all disciplines. However, it is considerably difficult to find a common definition for the design process. In his book, *Design Process*, architect Sam F. Miller comments that trying to define what the design process is by soliciting responses from a number of practitioners would render as many definitions. When using the design process, each designer develops her or his own technique for application. Influences, attitudes, and backgrounds directly affect a designer's application of the design process

(Miller, 1995). The desired end result, though, is the same regardless of discipline: quality design.

The American Institute of Architects' (AIA) (2003) web site states the following about the deign process:

> By helping you define the building project, architects can provide meaningful guidance for design. Plus, when architects are involved at the earliest planning stage, they gain more opportunities to understand your business, develop creative solutions, and propose ways to reduce costs. The long-term result is a facility that adds to the productivity, efficiency, and effectiveness of your operation (p. 1).

Similarly, the American Institute of Graphic Arts (AIGA) breaks down the design process into a 12-step program: 1. defining the problem 2. envisioning the desired end state 3. defining the approach by which victory can be achieved 4. inciting support and then action 5. seeking insight to inform the prototyping of the solution 6. prototyping potential solutions 7. delineating the tough choices 8. enabling the team to work as a team 9. choosing the best solution, then acting on it 10. making sure people know about your solution 11. selling the solution 12. rapidly learning and "tacking" based on your successes and failures (American Institute of Graphic Arts, 2003).

The National Council for Interior Design Qualification (NCIDQ), the accrediting body for professional interior designers, in discussing the definition of an interior designer, uses phrases such as: analyzes the client's needs, goals, and life and safety requirements; integrates findings with knowledge of interior design; formulates

preliminary design concepts that are appropriate, functional, and aesthetic; and uses verbs including develops, prepares, collaborates, reviews, and evaluates.

According to the Industrial Designers Society of America's (IDSA) web-site, "industrial designers develop concepts and specifications through collection, analysis and synthesis of data guided by the special requirements of the client or manufacturer..." (Industrial Designer's Society of America, 2003, p.1).

Terms and definitions may vary, but the design community did possess a general consensus of the design process, its role, and importance in the production of design. There must be some awareness of the design challenge. Investigation into existing parameters and needs must take place. End users must be consulted in the formulation of a design solution. Information must be assessed, analyzed, and appropriately interpreted. A number of solutions should be explored, examining all possibilities. The client, or end user, should be presented with a clear and concise solution for the design. Flexibility must be available on both sides to achieve a common beneficial product.

It appears that a discrepancy exists between on-the-job requirements of designers and training received in undergraduate design programs. Do designers use the design process and is an interdisciplinary design education perceived to be beneficial to interior design practitioners?

CHAPTER 3

METHODOLOGY

Participants

Participants were designers representing the top 100 interior design firms of 2003 as determined by Interior Design Magazine as well as members of the Interior Design Educators Council (IDEC). A number of design professions were claimed by the participants including: architecture, interior design, product design, consultant, professor, chief executive officer, firm principal, department chair, vice president of business development, creative director, marketing director, and designer assistant.

The uploaded survey was initially tested by staff members of East Tennessee State University's (ETSU) Office of Information Technology, faculty members of the Applied Human Science Department at ETSU, and one design practitioner to ensure proper functioning of the software. A list of the top 100 interior design firms of 2003 (see APPENDIX D) was retrieved from www.interiodesign.net to provide the sample. Each listed firm was researched using the World Wide Web to secure an actionable electronic mail address. Eighty-two firms (see APPENDIX E) were individually e-mailed an introductory letter outlining the research with a hyperlink inserted to route the participants to the uploaded survey and instructions for submitting the completed survey. No actionable electronic mail address could be secured for 18 of the listed firms. An electronic mail message was also posted to the IDEC group page, idec@yahoogroups.com, requesting participation in the survey and provided participants a hyperlink to access the survey.

Instrumentation

An 11-item survey was produced by the researcher for the purpose of this research. Initially, a collection of possible questions was assembled and reviewed by a variety of individuals including the researcher's graduate committee chairperson, two professors who taught research methods courses, an educational consultant possessing a graduate degree, and fellow graduate students. The individuals were asked to review each question as to the relevancy and value in relation to this study. When the 11 items were agreed upon, the physical survey was produced for a small pilot survey. The pilot survey was administered to the researcher's graduate committee chairperson, one design practitioner, and three peer graduate students. Corrections and changes were made in reference to the pilot survey. Internet web space was secured from East Tennessee State University for the posting of the survey. The survey was reproduced via Frontpage Software and uploaded to www.etsu.edu/tlc/dolan. When completed, the survey was designed to be automatically returned, anonymously, to the researcher's electronic mail address.

Procedure

Responses were received by the researcher via electronic mail and saved in a dedicated file on a personal computer. Responses received from May 2, 2003, to May 31, 2003, were calculated in the research. Statistical analysis on submitted data began May 31, 2003, using Microsoft Excel Software. Descriptive statistical methods were employed to produce the findings herein represented. Microsoft Excel Software was used to categorize data as well as the graphing of data.

CHAPTER 4

FINDINGS

Results from the 11-question survey indicate that of the 59 respondents, 53 or 89.9% of respondents indicated that they use the design process compared with six or 10.1% of respondents who indicated that they did not use the design process to produce a design product. Sixty-one percent of respondents were female, followed by 39% male. As illustrated in Figure 2, the dominant selected discipline of respondents was Interior Design at 62.7%, followed by Architecture with 37.2%. The education era of the sample was evenly dispersed from 1961 to 2000 (see Figure 1). Sixty-eight percent of respondents claimed training in one discipline (see Figure 3). Seven respondents indicated that they do not use interdisciplinary design in their practice contrasted with 49 respondents who noted that they do use interdisciplinary design in their practice. Fifty-one respondents or 69.4% of the sample indicated that they view interdisciplinary design as an added value to services provided. Twenty-two percent or 13 respondents said that interdisciplinary design was not an added value to services provided. Fifty-one respondents responded that interdisciplinary design training makes them professionally more marketable, while two respondents indicated that interdisciplinary design training did not make them professionally more marketable. Six respondents were undecided and indicated that interdisciplinary design training possibly made them professionally more marketable. Figure 5 depicts the number of professional affiliations claimed by respondents.

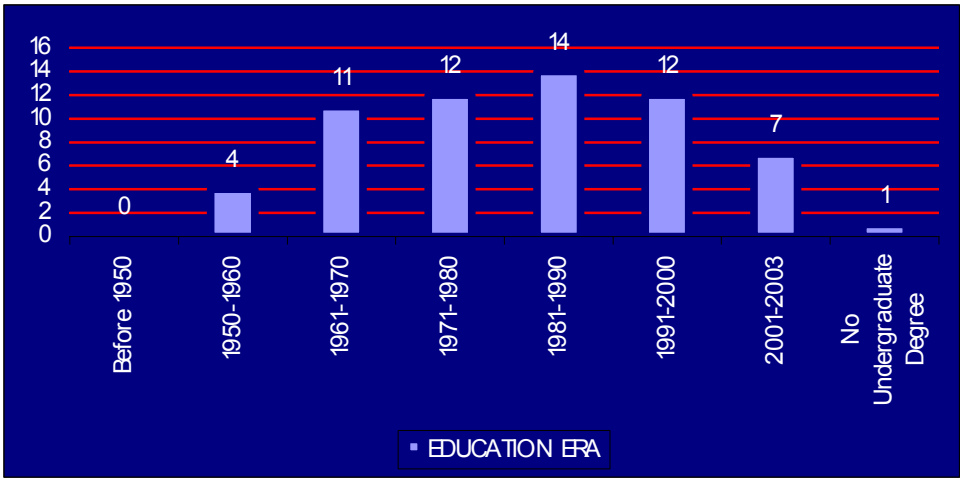

Figure 1. Respondents' Education Era.

Survey Question 10. For statistical purposes only, please indicate your undergraduate graduation era.

Before 1950 1950-1960 1961-1970 1971-1980 1981-1990

1991-2000 2001-2003 No undergraduate degree

No respondents indicated educational training before 1950. Four respondents received educational training between 1950 and 1960.The education era of 1961 to 1970 accounted for 11 respondents. Twelve respondents indicated training from 1971 to 1980. Topping the education era of respondents was the time period between 1981 and 1990 with 14 responses. Twelve respondents received their education from 1991 to 2000, followed by seven respondents in the years 2001 to 2003. One respondent indicated no undergraduate degree.

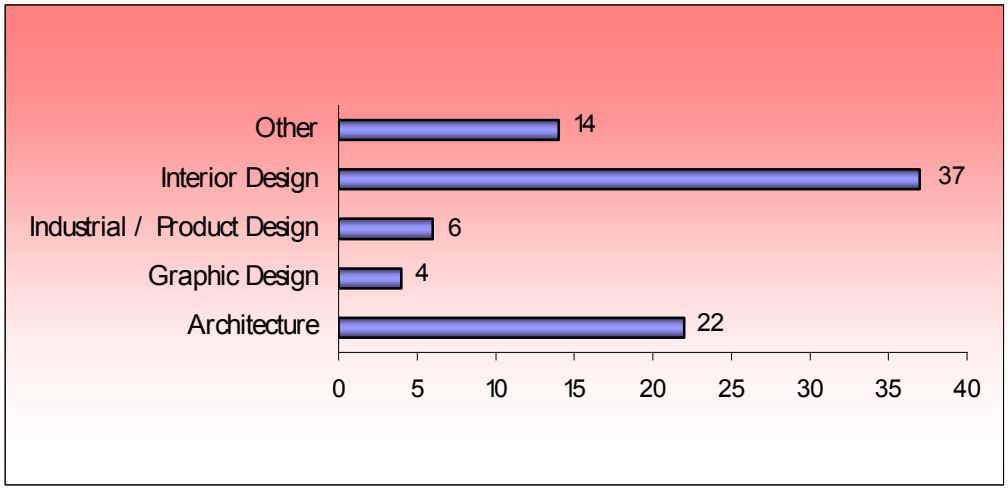

Figure 2. Disciplines Represented By Respondents.

Survey Question 4. Primary job function?

Thirty-seven respondents indicated interior design as their profession. Architecture was represented in the sample with 22 respondents. The category of industrial/product design was selected by six respondents. Graphic design had the least amount of practitioners with four. Fourteen respondents chose the category other to indicate their design discipline.

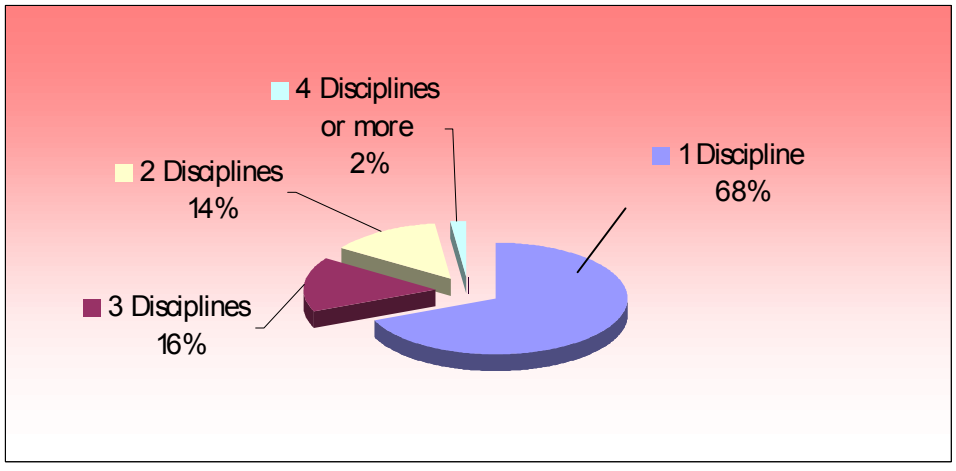

Figure 3. Number Of Disciplines Claimed By Respondents.

Survey Question 5. Were you trained in an undergraduate design program in any of the following disciplines? Please check all that apply.

Architecture Graphic Design Industrial/Product Design

Interior Design Other _____

Sixty-eight percent of respondents claimed training in only one discipline during their undergraduate career. Undergraduate training in two disciplines was indicated by 14% of respondents. Three-discipline training accounted for 16% of respondents, while training in four disciplines or more was claimed by two percent of respondents.

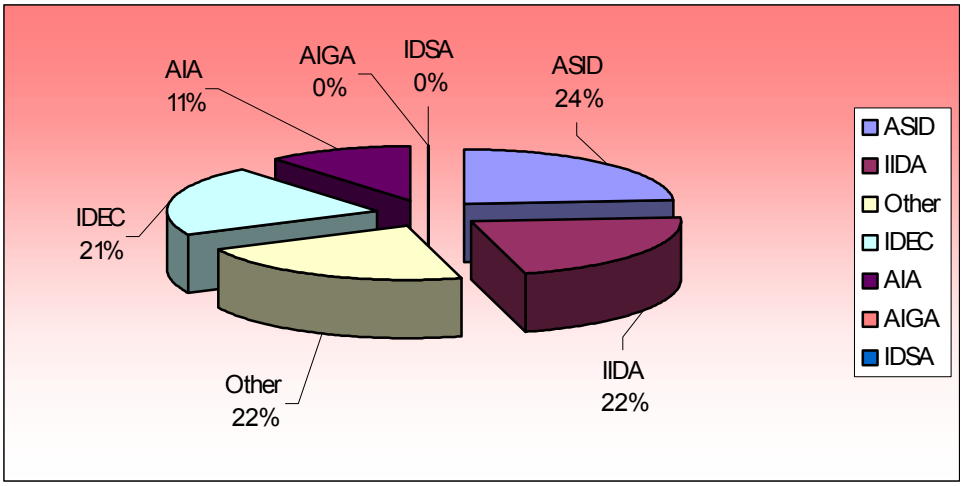

Figure 4. Respondents' Professional Affiliations.

Survey Question 9. Are you affiliated with any professional organizations? Please check all that apply.

AIA ASID AIGA IDSA IIDA

Other _____

The American Institute of Architects (AIA) was represented in the sample with 11% of respondents claiming membership. Twenty-four percent of respondents indicated membership in the American Society of Interior Designers (ASID). The sample included 22% of respondents as members of the International Interior Design Association (IIDA). The Interior Design Educators Council (IDEC) was represented with 21% of respondents. Twenty-two percent of respondents claimed membership in other professional organizations. No respondents indicated membership in the American Institute of Graphic Arts (AIGA) or in the Industrial Designers Society of America (IDSA).

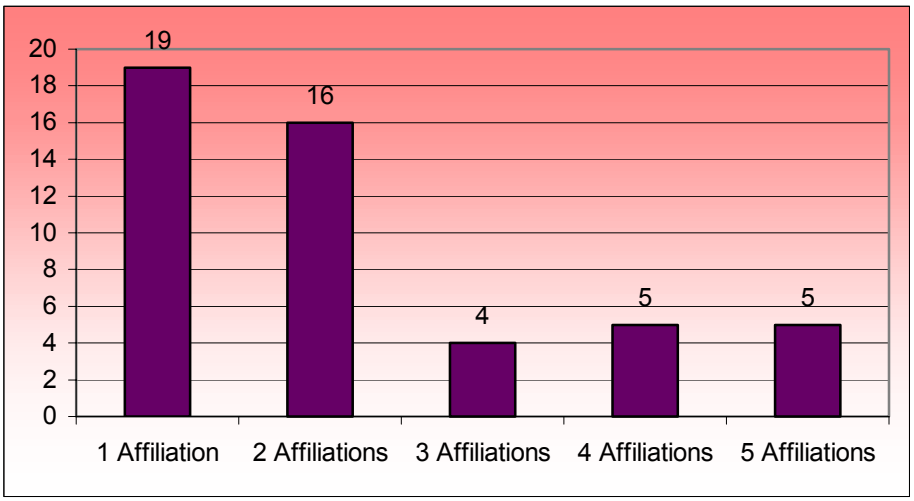

Figure 5. Number Of Professional Affiliations Claimed By Respondents.

Survey Question 9. Are you affiliated with any professional organizations? Please check all that apply.

AIA ASID AIGA IDSA IIDA

Other _____

Nineteen respondents indicated one professional affiliation. Two professional affiliations were claimed by 16 respondents. Three affiliations were selected by four members of the sample. Five respondents claimed affiliation with four organizations. Five additional respondents selected five professional affiliations.

CHAPTER 5

DISCUSSION

Based upon the literature review for this research, the author has concluded that little research is available in the area of interdisciplinary design. Most practitioners and students alike see the obvious relationship and value in interdisciplinary design, yet that exposure appears to come from some area other than the classroom. Good design speaks for itself regardless of discipline.

This limited research into somewhat of an unexplored territory did produce some interesting results. The practice of Interior Design, which was targeted by the researcher, has traditionally been viewed as a largely female dominated profession, probably due to the profession's roots in interior decorating. The statistics indicate that while 61% of respondents were female, 39% of respondents were male. Many interior design programs appear to have a male population of less than 5% of declared interior design majors, yet almost 40% of respondents representing the top 100 interior design firms of 2003 were male. This number could be the result of architects practicing in offices that provide interdisciplinary design services. Public perception of architects appears to be primarily male in gender, though women have made great inroads in the profession. Additionally, one might question the recipient of the research instrument. Men still maintain a controlling share of executive positions in business throughout the United States and such positions may possess job requirements that include some form of public relations which research could be considered kin. Interior design educators were also included in the sample. While the majority of interior design students tend to

be female, male professors still maintain considerable presence, probably due to interdisciplinary design education.

The sample's education era was evenly dispersed, peaking with 14 respondents between 1981 and 1990. This peak would be expected given the proliferation of interior design as a profession during this period and interior design organizations' and individual states' push for registration and licensing toward the end of this era. No respondents indicated training prior to 1950. This lack of representation could be contributed to world events prior to 1950. One must also consider that individuals receiving training prior to 1950 would be approximately 74 years of age, with an average graduation age of 21. Surprisingly, seven respondents represented the era 2001 to 2003. Accounting for 11% of respondents, these designers could be termed recent graduates and are employed among the top 100 interior design firms. One respondent indicated no undergraduate degree. Vocational training programs, apprenticeship programs, and indentured servitude, once the rule of design professions, has very few remaining practitioners, probably due largely to expiring grandfather clauses for professional registration and licensing.

By category, interior design possessed the largest number of respondent's disciplines with 37 responses. This is not surprising given that the researcher targeted interior design firms. However, 22 respondents indicated architecture as their undergraduate training. This representation bears further investigation as members of the architecture community, and specifically the National Council of Architectural Registration Boards (NCARB), have been less than welcoming of the interior design profession, going as far as to legally battle the interior designer's right to practice. This

specific research does not allow for further investigation into this area but does provide a foundation for further research.

Industrial/Product Design was represented with six respondents, closely followed by four respondents with training in Graphic Design. While formal undergraduate training may not have been indicated in these areas for the majority of those surveyed, the researcher would contend that a larger number of respondents have some form of training in these areas that extends beyond the undergraduate classroom, as is evidenced by overwhelmingly positive response to survey question numbers 6, 7, and 8, which will be discussed later.

Fourteen respondents indicated training in other areas. This training would include landscape architecture, textiles, visual/fine arts, housing, hotel administration, home economics, historic preservation, and graduate studies. The researcher believes that further analysis into the area of interdisciplinary design would include a component of design program curriculum assessment to better ascertain reliable statistics on curriculum composition incorporating elements of interdisciplinary design. Survey Question 5. may have been viewed by respondents as addressing only the major area of study and not the complete curriculum.

Of the 59 participants, 49 indicated that their firms use interdisciplinary design in their practice. Seven participants indicated that their firms do not use interdisciplinary design in their practice. Additional research should be conducted identifying the specific design disciplines employed by these firms and in what capacity these services are provided.

Forty-one respondents or 69% of the sample viewed interdisciplinary design as an added value to services provided compared to 13 respondents, or 22% of the sample, who did not view interdisciplinary design as an added value. In reviewing web sites of the top 100 interior design firms of 2003, the researcher found that many of these firms publicly advertise interdisciplinary design services. No statistics were collected for this element, though the researcher would estimate that greater than 50% of the represented firms advertised these services. It is unclear how the firms provide these interdisciplinary design services. Being listed in the top 100 interior design firms' category denotes that all of these firms practice interior design, yet the provision of additional services is unclear. Staff designers could have received additional training in related areas to provide these services. Designers trained in only specific disciplines could be hired as employees of the firms or secured by retainer for their services.

Eighty-six percent of those surveyed indicated that interdisciplinary design training makes them professionally more marketable. As the well-defined boundary lines of specific disciplines overlap more and more, this trend should increase. Graduate programs, continuing education, and advanced training have all contributed to increased marketability. With companies in all sectors downsizing, absorbing, thinning, or whatever today's catchword is, employees, including designers, are being expected to do more with less. Any service that can be provided in-house is not only additional opportunities for clients, but also additional profit for companies, which translates into job-security for employees. Some areas of academia still favor individuals with omnipotent knowledge in one unique area. However, based on non-scientific survey of

advertised employment opportunities, employers and firms are looking for well-versed, diversified employees that can contribute in many areas.

The survey instrument used in this research provided respondents with an opportunity to provide additional comments to the researcher via a blank form. Of the fifty-nine respondents, five chose to include comments with the submission of the survey. The majority of the comments were related to the survey questionnaire.

This research questions the practice of interdisciplinary design and its related disciplines and attributes. However, any research into this area uncovers a number of word pairings for this practice. Multidiscipline, cross discipline, integrated design, and unified design are terms frequently used to describe what the researcher has defined as interdisciplinary design. Additional research into this area should include a very thorough definition of exactly what given terminology would indicate. Detailed examples or scenarios of how firms practice in this manner may be most useful in understanding the research intent. Prototypical curriculums incorporating such disciplines might also be included to illustrate the relational nature of the disciplines.

Survey question 1 states “Do you utilize the design process to produce a design product?” Two respondents commented on the wording of this question. One respondent indicated a more complete definition of design product was needed while another respondent questioned the definition of the design process. This respondent further stated that there are many definitions to the term design process and questioned if the researcher was implying the definition provided by the National Council for Interior Design Qualification (NCIDQ) or another definition. The researcher contends that the question could use a more complete definition to prevent any confusion. As written,

question 1 provides little insight into the research question and should be rewritten to better clarify the question's intent. Restructuring and rewording this question could allow for advanced statistical analysis of research data.

Survey question 5 states "Were your trained in an undergraduate design program in any of the following disciplines? Please check all that apply." The researcher does not allow for a yes or no response to the initial part of the question, but refers to a yes or no response in question 6, "If your answer to question #5 was YES, does this interdisciplinary design education make you professionally more marketable in your career?" Question 5 should be rewritten to clearly provided one answer to the first question and provide an additional question for the items that apply. One respondent suggested the following wording for question 5: "Within your undergraduate degree program, were courses in disciplines other than interior design required? " However, this would eliminate a number of practitioners who were trained in an undergraduate program other than interior design.

This research specifically questions the curriculum of undergraduate degree programs. A number of degree programs have restructured their curriculums to include a first professional degree, Master of Science, Master of Architecture, Master of Interior Design, in lieu of a program terminating in a Bachelor's Degree. Additionally, this research does not account for practitioners who have advanced degrees beyond a Bachelor's Degree. Future research in this area should allow and provide for this segment to be adequately represented, as a number of practitioners choose to use advanced degrees as an opportunity to explore related disciplines, furthering their marketability.

A number of respondents indicated training in only one discipline, but the majority responded in the affirmative regarding questions 6, 7, and 8, addressing increased marketability due to interdisciplinary design, firms using interdisciplinary design, and the client's view of interdisciplinary design as an added value to the firm's services. Obviously a disparity exists between indicated training and the recognition of the value of interdisciplinary design according to this survey as written. Further research is needed to clarify this lack of congruity.

CHAPTER 6

CONCLUSIONS

The research indicates that a discrepancy exists between on the job requirements of designers and undergraduate curriculum, resulting in professional expectations often exceeding undergraduate exposure. Leading design firms are practicing interdisciplinary design and providing these services to their clients. Employers and practitioners view these services as added value for the firm and increased marketability for the designer.

It is unclear where the additional training for the interdisciplinary design services is provided or if these services are outsourced through other design industry professionals. Specific interdisciplinary design services have not been defined in this research outside of architecture, graphic design, industrial/product design, and interior design. Research into these specifics could be very valuable for curriculum development of design programs. However, some firms may be reluctant to divulge details about their operating practices citing competition and trade secrets.

Additionally, further research and analysis into the curriculums offered by design programs would be beneficial in better understanding the dynamics of interdisciplinary design and its exposure to students. During the late 1980s and early 1990s, the education community saw a large movement to teach whole-language learning, incorporating concepts and applications across subjects and disciplines. Maybe it is time for the design community to review its instructional pedagogy and the inherent value of an understanding and exploration of related disciplines. However, no designer can be an expert in all areas. He or she must rely on the expertise of other allied

practitioners in areas the designer has little experience in or does not possess the educational background or competency. Exposure to allied disciplines will not produce design generalists, but rather foster an appreciation and better understanding of what each form can bring to a project. Many designers, the researcher included, were required to fulfill a number of course hours in art history for their undergraduate curriculum. A unique awareness of the role the arts have played through history is an end result of this opportunity, not to mention learning from masters and inspiration. However, this exposure does not make us art historians, yet we learn to value those practitioners for their education and resources and utilize them as such. Whole courses do not need to be set aside for introduction to various design disciplines. The majority of design programs possess some form of core introduction classes that would be ideal opportunities to expose students to the design world as a whole, and not segmented entities. This will be no easy task. The requirements of accrediting bodies, associations, registrations, licensing, memberships, university boards, and an infinitum of additional factors must be navigated and addressed.

Unfortunately, politics are also a factor. If we are honest, who has not seen a faculty member, professor, or chairperson willing to compromise the integrity of some programs for their own personal advancement? Reallocating $5,000 of a $250,000 budget may appear inconsequential on paper and politically a good move. We must consider though the results of these actions. Programs all across the country have limited summer-school offerings due to budget short-falls. Students are being asked to extend their educational careers by one, two, and in some cases, even three semesters,

due to lack of finances. These same students will be asked to pay tuition increases of as much as 14% to 20% with no increase in services provided.

As practitioners, we must be receptive to the role that interdisciplinary design plays, and will play, in our careers. Territorial marking will only perpetuate a division between the disciplines and create additional barriers for new practitioners to overcome. The researcher does not endorse, nor advocates, a universal design degree. Each discipline has distinguished the practice through specialists in each field, which are recognized and accepted by those in the field. Rather, a foundational understanding of related disciplines would allow practitioners to meet on common ground, with a similar base of knowledge and a mutual end-result as the goal.

This is an exciting time to be a designer. Technology has allowed us to far surpass our wildest dreams. The ease with which we share communication, documents, samples, ideas, and doodles is revolutionary. World design is no longer restricted to trade publications and magazines. Internet accessibility has allowed designs, both new and old, in Bilbao, Milan, Melbourne, and Jerusalem to be explored at most any location, city, county, or farm.

The design community must find a way to bridge the distance between the disciplines. Undergraduate education and curriculum would be an ideal launching spot. Much research is still to be conducted in this area. This research alone illustrated that interior designers appreciate and value graphic design, yet we know so very little about the practice. Signage, a code requirement in all commercial buildings, is specified daily, though, in my experience, many designers can not discuss font, point size, or kerning to adequately express the design intent.

Students are asking for broader exposure to allied arts. Our professions are demanding interdisciplinary skills and relationships. We must logically, organizationally, and strategically meet this challenge as design continues to evolve into an integral part of our lives and society.

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APPENDICES

Appendix: A

Survey Cover Letter

May, 2003

Dear _____,

My name is Timothy Dolan and I am a graduate student at East Tennessee State University located in Johnson City, Tennessee. Professionally, I am a Registered Interior Designer in the State of Tennessee and am currently pursuing a Master of Science Degree under the Thesis Option.

In partial compliance for the requirements of this degree, I am performing research in support of my thesis question: What outcomes are realized in an interdisciplinary design education, incorporating an understanding and appreciation of each specialty as it relates to the overall design process, as opposed to the traditional and segmented hierarchical approach common in so many of today's universities and colleges? This research data will be complied and published in my thesis.

Clicking on the following link will take you to a survey instrument that I have produced for the purpose of this research. I am very aware of the time demands placed upon designers in our competitive market, but I would sincerely appreciate your effort in taking a few moments today to complete this survey and further the research of design education. It is estimated that completing this questionnaire will take less than five minutes. Your participation in this research is voluntary. You may refuse to answer any questions. However, the validity of my research is directly impacted by your response or lack of response. Let me thank you in advance for your help.

Please click the following link to access the survey: www.etsu.edu/tlc/dolan

When the survey is completed, simply click on the "Submit" button at the bottom of the form to return the survey.

Should you have any questions or require additional information, you may contact me at [423] 543-4202 or contact Dr. Nancy L. Nehring, Committee Chair, at [423] 439-7535.

Again, thank you for your time and your support of design education.

Sincerely,

Timothy D. Dolan, ASID

Appendix: B

IDEC Cover Letter

One of our students is working on a master's degree in interior design and needs your help through a response to a short survey. Please hold down the "Control" button and click on the following link to access his survey. Complete the survey, and click on the submit button to send it. Thanks. www.etsu.edu/tlc/dolan

Nancy Nehring, Ph.D.
EAST TENNESSEE STATE UNIVERSITY
Dept. of Applied Human Sciences
PO Box 70671
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Appendix: C

Interdisciplinary Design Education Survey

DISCLAIMER: IF YOU ARE UNDER THE AGE OF 18, PLEASE DO NOT COMPLETE THIS SURVEY.

DIRECTIONS: Please click on the answer that corresponds to the question, check all boxes that apply or fill in the blank with your answer. When the survey is complete, please click on the “Submit” button at the bottom of this form.

For the purpose of this survey, interdisciplinary design will be defined as design education, practice or other design application that incorporates any combination of the following design arts: architecture, graphic design, industrial/product design or interior design.

1. Do you utilize the design process to produce a design product?

   YES NO

   NOTE: If your answer to the above question is NO, please stop the survey and click on the “Submit” button at the bottom of this form.

2. Firm Name:

   _____

3. Gender: MALE FEMALE

4. Primary Job

   Function:_____

5. Were you trained in an undergraduate design program in any of the following disciplines? Please check all that apply.

Architecture Graphic Design Industrial/Product Design

Interior Design Other

_____

6. If your answer to question #5 was YES, does this interdisciplinary design education make you professionally more marketable in your career?

   YES NO MAYBE

7. In your current practice, does your firm utilize interdisciplinary design?

   YES NO

8. Do your clients view your firm's interdisciplinary design resources as added value to the firm's services?

   YES NO

9. Are you affiliated with any professional organizations? Please check all that apply.

   AIA ASID AIGA IDSA IIDA

   Other _____

10. For statistical purposes only, please indicate your undergraduate graduation era.

    Before 1950 1950-1960 1961-1970 1971-1980 1981-1990

    1991-2000 2001-2003 No undergraduate degree

11. Additional Comments:

_____

_____

_____

_____

_____

_____

_____.

Thank you for your time in completing this survey. Please click on the “Submit” button once.

Submit Reset

Appendix: D

TOP 100 INTERIOR DESIGN FIRMS OF 2003

Skidmore, Owings & Merrill

Nelson & Associates

Hellmuth, Obata & Kassabaum

OWP&P Architects

RPA (Retail Planning Assoc.)

A/R Environetics

Pavlik Design Team

Creative Design Consultants

Flad & Associates

Gensler

ISI (Interior Space International)

Hendrick

Wilson & Associates

Cubellis Associates

Ai

ADD

Gresham Smith & Partners

Einhorn Yaffee Prescott Architecture & Engineering

Griswold Heckel & Kelly Associates

ASD (Associated Space Design)

United Systems Integrators

Ziegler Cooper Architects

Cunningham Group

Karlsberger Companies

IA (Interior Architects)

Swanke Hayden Connell Architects

Peter Marino Architect

Smallwood Reynolds Stewart Stewart Interiors

Bergmeyer Associates
Hirsch Bedner Associates
Concepts 4
DES Architects & Engineers
Ballinger
Brennan Beer Gorman Monk/Interiors
NBBJ
Gould Evans Affiliates
Studios Architecture
Callison Architecture
RSP Architects
Butler Rogers Baskett Architects
TPG (The Phillips Group)
Cannon Design
JGA
Staffelbach Design Associates
Corgan Associates
Tricarico Group
Sasaki Associates
Shepley Bullfinch Richardson and Abbott
Silvester Tafuro Design
Walker Group/CNI
HKS
King
Jung/Brannen Associates
SpAce
Vitetta
DBI Architects
Environments Group
Rothenberg Sawasy Architects
Leo A. Daly

CUH2A
Wimberly Allison Tong & Goo
Perkins Eastman Architects
Jacobs
Slifer Designs
Granary Associates
RMW Architecture & Interiors
Mancini-Duffy
Design Forum
H. Chambers Company
OPX
DiLeonardo International
Carrier Johnson
Zimmer Gunsul Frasca Partners
Brayton & Hughes
Gettys Group
DMJM
Tsoi/Kobus & Associates
HDR Architecture
HLW International
CBT/Childs Bertman Tseckares
Little Diversified Architectural Consulting
Switzer Group
SmithGroup
RTKL Associates
HLM Design
SCR Design Organization
TVS Interiors
Loebl Schlossman & Hackl
Ellerbe Becket
Marc-Michaels ID

Elkus/Manfredi Architects

Perkins & Will

Gwathmey Siegel & Associates

Roger Ferris & Partners

FRCH Design Worldwide

PageSoutherlandPage

Ted Moudis Associates

Group Goetz Architects

Ewing Cole Cherry Brott

VOA Associates

Appendix: E

Surveyed Firms

FIRM
Skidmore, Owings & Merrill
Nelson & Associates
Hellmuth, Obata & Kassabaum
OWP&P Architects
RPA (Retail Planning Assoc.)
A/R Environetics
Pavlik Design Team
Creative Design Consultants
Flad & Associates
Gensler
ISI (Interior Space International)
Cubellis Associates
Ai
ADD
Gresham Smith & Partners
Einhorn Yaffee Prescott Architecture & Engineering
Griswold Heckel & Kelly Associates
ASD (Associated Space Design)
United Systems Integrators
Cunningham Group
Karlsberger Companies
IA (Interior Architects)
Swanke Hayden Connell Architects
Peter Marino Architect
Smallwood Reynolds Stewart Stewart Interiors
Bergmeyer Associates
Hirsch Bedner Associates
DES Architects & Engineers
Ballinger
NBBJ
Gould Evans Affiliates
Callison Architecture
Butler Rogers Baskett Architects
TPG (The Phillips Group)
JGA

Corgan Associates
Tricarico Group
Sasaki Associates
Shepley Bullfinch Richardson and Abbott
Walker Group/CNI
HKS
Jung/Brannen Associates
Vitetta
Environments Group
Rothenberg Sawasy Architects
CUH2A
Wimberly Allison Tong & Goo
Perkins Eastman Architects
Slifer Designs
Granary Associates
Mancini-Duffy
Design Forum
H. Chambers Company
OPX
DiLeonardo International
Carrier Johnson
Zimmer Gunsul Frasca Partners
Brayton & Hughes
Gettys Group
DMJM
Tsoi/Kobus & Associates
HDR Architecture
HLW International
CBT/Childs Bertman Tseckares
Switzer Group
SmithGroup
RTKL Associates
SCR Design Organization
TVS Interiors
Loebl Schlossman & Hackl
Ellerbe Becket
Marc-Michaels ID
Elkus/Manfredi Architects
Perkins & Will
Gwathmey Siegel & Associates

Roger Ferris & Partners
FRCH Design Worldwide
PageSoutherlandPage
Ted Moudis Associates
Group Goetz Architects
Ewing Cole Cherry Brott
VOA Associates

VITA

TIMOTHY D. DOLAN

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Education:	Public Schools, Elizabethton, Tennessee The University of Tennessee at Chattanooga, Chattanooga, Tennessee; Human Ecology, B.S., 1993 East Tennessee State University, Johnson City, Tennessee; Technology, M.S., 2003
Professional Experience:	Graphic Artist, Spectra, Inc., Chattanooga, Tennessee 1993 – 1995 Designer, Baldwin Art Group; Rossville, Georgia, 1994-1995 Interior Designer, Visions Design Group, Inc., Johnson City, Tennessee 1999 Project Coordinator, Appalachian Management and Development Company, Elizabethton, Tennessee, 1995 -Present Adjunct Faculty Member, East Tennessee State University, College of Business and Technology, Johnson City, Tennessee, 1999-Present
Certification and Memberships:	National Council for Interior Design Qualification, Certificate Number 016868, April 2001. Registered Interior Designer, State of Tennessee, Certificate Number 00001033, September, 2001 American Society of Interior Designers, Professional Member Number 1214836
Honors and Awards:	Golden Key National Honor Society. Kappa Omicron Nu National Honor Society